

ENTOMOLOGICAL ITEMS.

APICAL APPLICATION OF APIS. "Sir John Lubbock says bees are not sympathetic. It may be stated, accordingly, that the warmth of their reception doesn't come from the heart."

PRIZE WORK ON TACTILE ORGANS. The French academy, on 21 Dec. 1885, granted the grand prize for anatomical and physiological research to Dr. Joannes Chatin, for his work (not yet published) on the tactile organs of insects and crustacea.

TENACITY OF LIFE IN CALLIPHORA VOMITORIA.—At the meeting of the Société entomologique de France, 8 July 1885, as reported in its Bulletin, Mr. Paul Audolent remarked that he had lately had an opportunity of proving the vital power of larvae of *Calliphora vomitoria*. Many of these larvae, which he had given as food to tritons, remained alive two days at the bottom of the water, and in fact pupated there. He had collected these pupae to see if they would reach the perfect state.

BIRDS NESTING IN HORNETS' NESTS.—In a letter to *Nature*, 12 March 1885, v. 31, p. 438, on birds nesting in ants' nests, Mr. W. Davison says of *Halcyon chloris*, a species of kingfisher, which also nests in ants' nests:

At Mergui, in South Tenasserim, I found a nest of *H. chloris* in a hornets' nest, and although I saw the birds repeatedly enter the hole they had made in the hornets' nest the hornets did not seem to mind it, but they resented in a very decided manner my attempt to interfere with the nest.

LIFE OF DR. DZIERZON.—Dr. Oskar Krancher contributes to the *Deutscher bienenfreund* for January 1885, an account of the life of Dr. Johann Dzierzon, well-known for his contributions both to the theory of bee-life and to practical apiculture. Dr. Dzierzon, or as he was commonly designated, Pastor Dzierzon, was born 16 Jan. 1811, in Lowkowitz, near Kreuzburg, Upper Silesia. Shortly after finishing his studies at Breslau,

he became, in 1835, pastor in Karlsmarkt, near Brieg, in Silesia, where he remained until lately, having just returned to live in the town where he was born.

STRUCTURE OF EYES OF DIPTERA. Professor C. V. Ciaccio, of Bologna, published in the last volume (ser. 4, v. 6, fasc. 1) of the "Memorie della R. accademia dell' Istituto di Bologna" a series of excellent illustrations of the minute structure of the eye of diptera. The paper, published under the title of "Figure dichiarative della minuta fabbrica degli occhi de' ditteri," consists of twelve large plates with explanatory text (28 pages), and gives microscopical details (enlargement from 190 to 410) of eyes of *hippoboscidae*, *oestridae*, *syrrhidae*, *muscidae*, *empidae*, *leptidae*, *asilidae*, *bombylidae*, *tabanidae*, *chironomidae*, *tipulidae* and *pulicidae*.—*Entom. nachrichten*, May 1885, Jahrg. 11, p. 144.

STRUCTURE AND HABITS OF OEDEMATO-PHAGA AEGUSALIS. E. MEYRICK (Trans. Entom. soc. Lond., 1884, p. 73-74) makes a new genus, *Oedematophaga*, for *Pyrallis aegusalis* Walk., "correcting" the specific name *aegalis*. *O. aegusalis* is a curious insect, having as one of its generic characters "Anterior femora in male with an expansible tuft of hairs," a character recalling a peculiarity of certain species of *Catocala*. The larvae feed gregariously "in large, very irregularly spherical, rough galls, three or four inches in diameter, on the branches of a phyllodineous *Acacia*," . . . "the larva eats galleries through the substance of the galls, ejecting a good deal of the excrement from holes in the surface.

DIPTEROUS PARASITE OF THE RHINOCEROS.—Dr. Friedrich Brauer describes and figures in the Verhandlungen der zoologisch-botanischen gesellschaft in Wien (1884, v. 34, p. 269-271, pl. 10) the larva of a new genus and species of *oestridae* from the stomach of *Rhinoceros sumatrensis*. The larva differs strikingly from that of *Gastrophilus* in having the arcades of the posterior stigmata forming on each side three bands,

curving in zigzag, and not three concentric semicircles, from which peculiarity the author has given the insect the generic name *Gyrostigma*. The entire larva, the mouth-parts, and posterior stigmata of *G. sumatrensis*, the new species in question, are figured.

POSTURE OF NEWLY EMERGED BUTTERFLIES.—Mr. Joseph Anderson called attention, several years ago, in the *Entomologist*, to “a singular habit of *Afatura iris* upon emerging from the puparium,—to wit, its clinging to the empty case with the head uppermost for five or six hours, and then reversing the position (still keeping hold of the chrysalis) and remaining with head down and wings upward for a similar time.” Since that time Mr. Anderson has learned from Mr. F. N. Pierce, of Liverpool, that *Vanessa polychloros* has a similar habit, except that it leaves the pupal case and clings to a branch. In a note in the *Entomologist* for September 1885 (v. 18, p. 241-242), Mr. Anderson asks the reason for this curious habit of two butterflies, which thus differ in habit from *Vanessa io*, *V. urticae*, *V. cardui*, and *Erebica medea*.

EROSION OF GLASS.—Under this title William M. Ord communicates to *Nature*, 19 Feb. 1885, v. 31, p. 360, the results of some experiments upon the erosion of glass by alkalis in connection with colloid substances. These experiments were undertaken with especial reference to the question of how “white-ant mud” was capable of eroding glass. Mr. Ord thinks that “the white-ant mud must consist of a mixture of some colloid with carbonate of lime or some other salt capable of taking spherical form.” In conclusion he adds, as a result of his experiments, “It suffices, at the moment, to indicate that the surface of a glass slide may be eroded in a way to suggest the action of an acid, such as hydrofluoric acid, when no free acid is present; and that erosion may occur when the glass is brought in contact with alkaline fluid, a colloid, and crystalline substances capable of

assuming, in the presence of a colloid, spheroidal form.”

EUDAMUS TITYRUS FLYING AT NIGHT.—On the evening of 5 Aug. 1885, at 9 h. 30 m., I removed a mosquito netting from a window near which I was sitting, to close the window for the night, when a butterfly flew in. It fluttered very little in the room, and supposing it to be a moth I paid no particular attention to it at the moment. About ten minutes later, however, happening to approach the gas chandelier, I saw the butterfly suspended to one of the screws holding a glass globe around one of the gas-jets. It was stationary, but frequently uncoiled its tongue so that only the tip remained between the palpi, and then slightly coiled and uncoiled it so as to rub the tip between the palpi. It would suddenly coil the tongue up completely, and then soon resume the former motion. Upon my attempting to capture it, after watching it some time, it uncoiled the tongue so as to free the tip completely from the palpi, and then beat against the globe as a moth would to get at the flame. Finally it got inside the globe and scorched its wings and fell to the floor, but fluttered frantically when I tried to pick it up. It proved to be *Eudamus tityrus*, and is sent herewith.—*B. Pickman Mann*, at meeting of C. E. C., 11 Dec. 1885.

PARASITES NEMATODS.—M. Henri Gadeau de Kerville, at the meeting of the Société entomologique de France, 9 Sept. 1885, reported the finding of three species of nematods in arthropods, which are interesting additions to the lists of arthropods in which parasitic vermes have been found. The species of nematods were determined by A. Villot, of Grenoble, as follows: *Gordius emarginatus* Villot, of which the determination is doubtful because the caudal extremity of the specimen was partly hidden in the digestive tube of a *Lithobius forficatus*, its host, from which M. Villot did not wish to completely extract the worm; *Mermis acuminata* Siebold, from a larva of *Ypsipetes sordidata* Fab.; and

Mermis nigrescens Dujardin, of which a young individual was taken from a larva of *Hybernia defoliaria* L. *Gordius* has not been known hitherto as a parasite of a myriopod.

In this connection attention is called to a work on these parasites, which seems to be little known in America. This is Linstow's Compendium der helminthologie . . . 1878 [Rec., 3119], in which one is able readily to trace the literature of most species of parasitic worms if either the name of the host, whether vertebrate or invertebrate, or that of the parasite is known.

TOMATO-PLANTS AS REPELLANTS OF INSECTS.—According to the *Colonial mail*, a statement comes from the Cape Colony which is deserving the attention of botanists. It is alleged that insects shun the land on which tomatoes are grown; and the cultivation of the *Lycopersicum esculentum* is accordingly recommended in all cases where it is possible to grow it—under fruit trees, for instance, since the tomato will thrive in the shade of other trees, which few other plants will do—for the sake of the virtues attributed to it as prophylactic against the inroads of insect pests. It would be interesting to know whether the tomato has been observed to exercise any such effect upon insects elsewhere—in Canada, for instance, where the fruit is so popular—or whether it is only in warmer climates, like that of the Cape, that its peculiar powers are brought into play.—*Nature*, 1 Jan. 1885, v. 31, p. 202.

It may be sufficient to state that the use of tomato leaves as repellants of insects was recommended in France and in the United States at least as long ago as the year 1846, but that experiments properly made have shown the inefficacy of the remedy. The roots, stems, leaves and fruits of this plant are eaten by numerous species of insects. There is no reason to suppose that the Cape Colonists are any less ready than their northern relatives to jump to the conclusion, on insufficient grounds, that because a plant has

certain qualities noxious to man, it is therefore also noxious to insects.

FOSSIL THYSANURA.—At the meeting of the Société entomologique de France, 27 May 1885, as reported in its Bulletin, Mr. C. Brongnart made the following communication:

“Claus places the thysanura among the orthoptera; they are generally considered to be the primordial type of insects. No one has recorded them from the paleozoic strata.

“Nevertheless they existed as early as the coal period, for forty-five specimens have been found in the schists of Commeny. It is difficult to see the number of joints of the tarsi, palpi and antennae, but these organs are distinguishable on many specimens. The body is cylindrical, slender at the posterior part, and ends in a multiarticulate filament as long as the body. The antennae and tarsi are thickish. The head appears quite broad. The prothorax is very short, and the mesothorax and metathorax are equal in length and much longer than the prothorax. The abdomen has ten segments, equal among themselves; the terminal one, which bears a multiarticulate filament, is a trifle the longest. There seemed to me to be abdominal laminations upon one of the specimens, as there are in *Machilis*. The whole animal (antennae, feet, thorax, abdomen) is clothed with very thick and very short hairs. The body, including the abdominal filament, varies in length between 15 and 22 mm.

“This insect resembles morphologically *Lepisma* and *Machilis*; it differs from them by many characters, but principally in the presence of a single abdominal filament in the fossil form.

“I designate this ancestor of the living thysanura under the name of *Dusyleptus (dusys leptos) lucasi*, dedicating it to Mr. Hippolyte Lucas, of the Natural history museum of Paris.”

ON CARRYING HIBERNATING LARVAE THROUGH THE WINTER.—I have sometimes so carried larvae in ice boxes, or in ice

houses, or in snow banks, by aid of friends in the northern states mostly, but last fall I heard of a large room called a "cooler" at the Sanitarium at Clifton Springs, New York, in which meat and vegetables are kept, the temperature averaging 40° F. all the year, and my application for a little space was kindly received. In October, I sent on two boxes by express, in which were a large number of larvae, some of them very rare. Of these were *Argynnis halcyone*, just from egg; *Satyrus charon*, also just out of egg. These small larvae were in paper pill boxes, inside tin. There were also a few larvae of *Chionobas chryxus*, *Hip. ridingsii*, *Colias alexandra*, *Phyciodes picta*, in stages from second to fourth; and several *Melitaea rubicunda*, past third moult from Vancouver's Island, and [*M.*] *phaeton* at same stage. Early in March I received the larvae per express. On opening the box nearly every one of the young larvae first named were alive, and in a few moments were moving. The larger part of *rubicunda* and *phaeton* were in good condition. One *alexandra* out of two was healthy, and one *picta* out of three. The *chryxus*, past third molt (one), and the *ridingsii*, past first (one), were dead. On the whole, there was scarcely any loss from the four months seclusion. The *Chionobas*, I am disposed to think, died in transit to me, from rolling about in its box, as it was stout and healthy looking when I received it. Probably all the satyrid larvae would have done better if they had not been allowed to feed in the fall, but had on hatching been subjected to the cold. I had no plants ready for these larvae on their arrival except grass, and on this I placed part of the *charon*, who very soon began to eat along the edges of the leaves. The remainder of all species I put on ice, or under rocks in the woods, to

stay till I could force food-plants for them.—*W: II: Edwards* (Can. entom., June 1885. v. 17, p. 113-114).

ANATOMY OF *MACROTOMA PLUMBEA*. — "Ueber *Macrotoma plumbea*. Beiträge zur anatomie der poduriden" is the title of a 46-page inaugural dissertation, by Albert Sommer, from the Göttingen university, also published, with a plate, in the *Zeitschrift für wissenschaftliche zoologie*. The author studied carefully the histological structure of the ventral tube with its pocket-formed, evaginable lobes for attachment of the insects to objects beneath them, and finds that unicellular glands furnish the tube with the secretion necessary for attachment, and make it a remarkably good adhering organ that enables the little animal to move on vertical smooth surfaces. The egg is formed, by the union of yolk-substance, from an aggregate of cells at first of uniform shape which have their origin in the germarium; a germinal vesicle is lacking; a condition which calls to mind the eggs of viviparous dipterous larvae studied by Ganin. The observation is interesting that even the adult insects still molt every two or three weeks. In molting the old hairs are stripped from the new layer of skin; the scales, on the other hand, are shed without connection with the new ones. A gregarinid occurs as an almost constant parasite in the chylific ventricle; outside the digestive tract occur pseudonavicellae, cysticercae similar to those described by Stein from the digestive tract of *Tenebrio molitor*, and nematods rolled up spirally. It would have been better to have replaced the name *Macrotoma*, used in the *cerambycidae* since 1832, by *Tomocerus* Nicolet 1841. — *Entom. nachrichten*, July 1885. jahrg. 11, p. 221-222.

Nos. 135-137 were issued 21 Feb. 1886.